Material Safety Data Sheet
U.S. Department of Labor (OSHA 29 CFR 1910.1200)

Manufacturer's Name: **Prentiss Incorporated**
C. B. 2000
Floral Park, NY 11002-2000
Telephone Number: **(516) 326-1919**

Section 1: Chemical Identification

Product: 655-779 **Prentox® Resmethrin 0.5%**
EPA Signal Word: CAUTION
Active Ingredient (% W/W): Resmethrin (0.5%) (CAS # 10453-86-8)
Chemical Name: [5-(phenylmethyl)-3-furanyl] methyl, 2-2-dimethyl-3-(2-methyl-1-propenyl) cyclopropanecarboxylate
Chemical Class: Pyrethroid Insecticide mixture

Section 2: Composition/Information on Ingredients

Material:	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Resmethrin (0.5%)	N/A	N/A	N/A	No
Petroleum solvent (96.8%) (CAS # 64742-47-8)			(TWA) 300 ppm* *Supplier recommendation	
Co-solvent (0.625%) (Identity and CAS# confidential)	N/A	N/A	N/A	No
Food Grade Vegetable Oil (2.0%) (Identity trade secret)				No
Perfume (0.075%) (CAS# N/A)	N/A	N/A	N/A	No

Section 3: Hazards Identification

Routes of Exposure: Skin contact, inhalation and ingestion.
Signs and Symptoms of Overexposure: Runny nose, sneezing, and scratchy throat from inhalation may be experienced by some individuals.
Health Hazards (Acute and Chronic): Resmethrin causes slight skin irritation and is harmful if swallowed. Solvent may irritate eyes, and upon frequent of prolonged contact, be moderately irritating to skin, and cause dermatitis. Inhalation of solvent may cause nasal and respiratory irritation, and central nervous system effects, including headaches, dizziness, weakness, fatigue, nausea, possible unconsciousness, and even death. Ingestion of solvent may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration into the lungs may cause chemical pneumonitis, which can be fatal.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Section 4: First Aid Measures

If swallowed, call a physician or Poison Control Center immediately. Do not induce vomiting. Vomiting may cause aspiration pneumonia.
If inhaled, remove victim to fresh air.
If on skin, remove contaminated clothing and wash affected areas with soap and water.
If in eyes, flush eyes with plenty of water. Call a physician immediately if irritation persists.

Section 5: Fire Fighting Measures

Flash Point (Method Used): 153-167º F. (Closed cup)
Flammable Limits: **LEL:** 1.3 **UEL:** 8.8 (solvent - approximate)
Autoignition Temperature (solvent): Approximately 640º F.
NFPA Hazard Ratings: **Health:** 1 **Flammability:** 2 **Reactivity:** 1
Extinguishing Media: CO_2, foam, or dry chemical.

Special Fire Fighting Procedures: Do not inhale vapor. Use self-contained, positive pressure breathing apparatus and protective clothing. Keep unnecessary personnel away. Use water spray or fog to cool containers. Do not allow runoff to enter sewer systems or any body of water. This product is toxic to fish, birds and other wildlife, prevent spread of contaminated runoff. Do not decontaminate personnel, equipment or handle broken packages or containers without wearing the specified protective equipment and clothing. Decontaminate emergency personnel with soap and water before leaving the fire area.
Unusual Fire and Explosion Hazards: Combustible liquid, solvent can form combustible mixtures at temperatures at or above the flash point. Solvent can also accumulate static charges, which can cause an incendiary electrical discharge. "Empty" containers retain product residues (liquid and/or vapors), and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition, as they may explode and cause injury or death.

Section 6: Accidental Release Measures

Cover the spilled area with generous amounts of absorbent material, such as clay, diatomaceous earth, sand or sawdust. Sweep the contaminated absorbent onto a shovel and put the sweepings into a salvage drum. **Waste disposal method:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **Container disposal:** Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, burning. If burned, stay out of smoke.

Section 7: Handling and Storage

Handling Precautions: Do not use near heat or open flame. Avoid contact with pesticide and wear protective equipment to prevent contact with the product or its vapors.
Storage Precautions: Store away from heat and open flame. Do not store at temperatures below 40º F. If this material is exposed to temperatures below 40º F., there may be precipitation of the active ingredient out of solution. Check for crystallization. If evident, warm to 80º F. and thoroughly mix before using. Exposure to temperatures above 130º F. may cause bursting. Keep out of reach of children, domestic animals and pets. Do not contaminate water, food or feed by storage or disposal.
Other precautions: Periodically inspect stored materials.

Section 8: Exposure Controls/Personal Protection

Respiratory protection: Not required. Avoid inhalation of vapors.
Ventilation:

Local Exhaust:	As required to meet TLV.
Special:	Not applicable.
Mechanical;	As required to meet TLV.

Other: Not applicable.

Protective Gloves: Chemical resistant during mixing/loading operations recommended.

Eye Protection: Face shield, safety glasses or goggles during mixing/loading operations recommended.

Other protective clothing or equipment: Wear long pants, long sleeved shirt or other body covering clothes. Avoid skin or eye contact.

Work/Hygienic practices: Wash thoroughly after handling and before eating or smoking.

Section 9: Physical and Chemical Properties

Appearance:	Faint amber liquid.
Odor:	Mild woody odor.
Boiling Point:	N/D
Specific Gravity (H_2O = 1):	0.7874-0.8058
Vapor Pressure (mmHg):	2.58 @ 200° C. (Resmethrin Technical)
Melting Point:	113° F. (45 ° C.) (Resmethrin Technical)
Vapor Density (Air = 1):	N/D
Viscosity (Centipoise):	3.13-4.80 @ 24 ° C.
Evaporation Rate (Butyl Acetate = 1):	N/D
Solubility in Water:	Virtually insoluble.

Section 10: Stability and Reactivity

Stability:	Stable under normal storage conditions.
Conditions to avoid for stability:	Light, excessive heat and sources of ignition.
Incompatibility:	Strong oxidizing and reducing agents.
Hazardous Decomposition or Byproducts:	Carbon monoxide and carbon dioxide.
Hazardous Polymerization:	Will not occur.
Conditions to avoid for Hazardous Polymerization:	None.

Section 11: Toxicological Information

The following results are for Resmethrin Technical (85%):

Acute studies: Exposure levels tested in animals at or near the LD_{50} or LC_{50} have produced the following symptomology: decreased locomotion, tremors, salivation and erect body hair.

Acute Oral Effects:

LD_{50} (male rat) >5,050 mg/Kg

LD_{50} (female rat) 2,150 mg/Kg

Acute Inhalation Effects:

4-hour LC_{50} >9.49 mg/l

1 hour equivalent LC_{50} >37.96 mg/l (for USDOT purposes)

Skin Effects:

Absorption: LD_{50} >2,020 mg/Kg

Subchronic (Target Organ Effects): The NOEL established for resmethrin in a 90-day inhalation study was 0.1 g/M^3. The NOEL was 10 mg/Kg/day when dogs were fed diets containing resmethrin for 180 days.

Chronic (Cancer) Information: NTP, IARC and OSHA do not list Resmethrin as a carcinogen. Resmethrin did not produce any evidence of toxic effects when fed to rats at concentrations of up to 500 ppm for two years. Resmethrin was not considered to be oncogenic based on chronic feeding studies

conducted in rats and mice. Resmethrin is not considered to be teratogenic based on studies conducted in rabbits and rats.

Reproductive and Developmental Toxicity: A slight increase in the number of pups cast dead and a decrease in pup weights were observed when rats were fed diets containing 500 ppm (lowest dosage tested) or higher of resmethrin over three successive generations.

Neurotoxicity: Resmethrin is not considered to be a neurotoxin based on rat feeding studies conducted for up to 32 weeks.

Mutagenicity (Genetic Effects): Resmethrin is not considered to be mutagenic based on in vitro studies conducted with bacteria and yeast.

Section 12: Ecological Information

The following results are for Resmethrin Technical (85%):

Acute and long-term toxicity to fish and invertebrates:

The LC_{50} of resmethrin in rainbow trout is 2.4 µg/l or 2.4 ppb. The LC_{50} of resmethrin in bluegill sunfish is 8.75 ppb. The LC_{50} of resmethrin in goldfish is 28 ppb. (after aging 72 hours, water containing 250 ppb of resmethrin resulted in zero mortality).

Three applications of resmethrin at 0.10 pounds actual insecticide per acre applied at two-week intervals caused no mortality to fish, even where concentrations reached a maximum of 7.3 ppb in test pools. Under similar conditions using approximately 0.04 pounds per acre, or 7.3 ppb of actual insecticide in water, resulted in no mortality to grass shrimp.

Acute and dietary toxicity to birds:

The acute oral LD_{50} of resmethrin in male California quail was in excess of 2,000 mg/Kg.

The LC_{50} of resmethrin fed to Japanese quail in their diet was >5,000 ppm.

Dietary administration of resmethrin at 300 ppm for 23 weeks produced no adverse effects on reproduction in Bobwhite quail and in Mallard ducks.

Other environmental information:

This product is highly toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or public waters unless in accordance with requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

Section 13: Disposal Considerations

Waste disposal method: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **Container disposal:** Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, burning. If burned, stay out of smoke.

Characteristic Waste: Ignitable.

Listed Waste: N/A.

Section 14: Transport Information

DOT Classification: Not regulated.
B/L Freight Classification: INSECTICIDES; OTHER THAN POISON, NMFC ITEM 102120, CLASS 60.
International Transportation: Not regulated.

Section 15: Regulatory Information

SARA Title III Classification:

Section 311/312:	Acute health hazard
	Fire hazard
Section 313 chemicals:	
Resmethrin (0.5%)	(CAS # 10453-86-8)

This product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372. Any copies or redistribution of this MSDS must include this notice.

Proposition 65: Yes.
CERCLA Reportable Quantity (RQ): N/A.
RCRA Classification: N/A.
TSCA Status: Exempt from TSCA as regulated under FIFRA.

Section 16: Other Information

NFPA Hazard Ratings:

Health	1	0	Least
Flammability	2	1	Slight
Reactivity	0	2	Moderate
		3	High
		4	Severe

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Supersedes: September 9, 1999
Reason: Revision of sections 7, 11, 15

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